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"General education in the university college is so disparate in definition, so motley in context, so various in actual operation that it poses immense difficulties for the researcher." An examination of the position of general education in the complex university is very revealing of the institution's commitment to knowledge, and particularly to teaching. During the freshman year, undergraduates make crucial choices concerning their academic goals and performance and personal lives. These key decisions are usually made while the freshman is taking general education courses and he is highly influenced by his experiences in them. Although they may provide the most memorable undergraduate experiences, be used to reward bright students, and serve as an area of experimentation, general education courses are generally hard to staff. Depending upon the university's reputation, clientele, size and financial status, the 3 main channels open for faculty recruitment are: the tenured scholar, the tenureless, and temporary help. The graduate teaching assistant has a key role in defining the university and providing the student with his most important orientation to higher learning, but little is known about the assistant's recruitment, training, teaching ability or future career. Also, too little is known about the social matrix of general education or the context of power within which it must function. A running commentary of notes serve to compare, group and contrast the viewpoints of authors included in the bibliography. (JS)

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NEW DIMENSIONS

in Higher Education

Number 25

GENERAL EDUCATION IN THE COMPLEX UNIVERSITY

April, 1967

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NEW DIMENSIONS
IN HIGHER EDUCATION

GENERAL EDUCATION IN THE COMPLEX UNIVERSITY

by Sally Cassidy and Alice Haddix

Everett H. Hopkins, Editor

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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FOREWORD

(If and when this manuscript is published for general distribution, the Editor will gladly prepare an appropriate Foreword for the wider audience.)

HIGHLIGHTS

1. General education in the university college is so disparate in definition, so motley in context, so various in actual operation that it poses immense difficulties for the researcher.

2. An examination of the position of general education in the complex university is very revealing of that institution's commitment to knowledge and in particular of its commitment to teaching.

3. The freshman year is a decisive year for both the student and the institution. The undergraduate must make key decisions about his goals, his standards of academic performance, and the use he makes of his psycho-social moratorium for reassessing his capabilities and exploring his real interests. It is in general education courses that such crucial choices are made.

4. General education plays many roles in the complex university. It may serve as an area of experimentation. It may provide the most memorable undergraduate experience. It may be used to reward the diligent, the bright, and the enterprising, and it may also be the backwater for dullards and sluggards. However crucial or honorific its role, at almost every college, the general education courses are difficult to staff.

5. Depending on the university's reputation, clientele, size, and financial status, three main channels are open for faculty recruitment. The tenured scholar can be lured, the tenureless can be drafted, and temporary help can be hired.

6. The graduate teaching assistant bears the brunt of the initial contact with undergraduates. He is the staff member most accessible to them, and thus he often has a key role in defining the university and in providing the student with his most important orientation to higher learning. Despite his increasing importance, very little is known about the teaching assistant's recruitment, training, actual teaching ability, or future career.

7. Much too little is known about the social matrix of general education or the context of power within which it must function.

I. INTRODUCTION

A liberal education is often the focus of too great an expectation, not only in terms of intellectual development but in terms of the full development of a man's powers. The litany of its blessings is long.

To be liberally educated, a man must be taught how to think and what to think about. He has to know the ways and structures of knowledge. He has to be precise and sensitive, subtle and complex. He has to be committed to the great ends and values of his society and must participate in linking his profession to society. He has to be self-possessed and disciplined, free from passion and prejudice. He needs to be prepared for leadership, so that he may become the expositor and judge of situations and facts.

Such values and competencies cannot be exclusively developed from specialized training, however good that training may be. General education is needed to warm the precise and dispassionate scientist, to cool and discipline the ardent poet, and to link the scholar with mankind.

Yet all such aspirations cannot possibly be met. It is not surprising,

then, that we regularly hear laments over the passing of general education. We are told that the liberal arts college cannot fulfill its mission. The self-indulgent proliferation of courses creates a chaos that no faculty adviser or counselor can resolve. Students cannot be expected to make wise and responsible choices when the disciplines themselves are branching off into ever more differentiated specialties.

The explosion of knowledge has unsettled the basis for the organization of university departments. Departments are threatening to splinter into separate collegiate structures, the largest of these being the sciences, another the social sciences, and still another the humanities. Aside from the intense excitement of the few students who are fortunate enough to be in the right place at the right time, most students feel out of the current excitement, neglected, manipulated, outdistanced by the hardware that processes them. They react with either sullen withdrawal or outright revolt. Professors are increasingly escaping into the relative safety of graduate schools and institutes. The few faculty members who willingly taught undergraduates in the past are now repelled by student denunciations and their leveling demands.

Other than a few studies of specific institutions and reports on particular disciplines and individual courses, the professional journals are either panegyric or elegiac; they contain very little hard knowledge

about general education in the university college. Barton's discussion of Jacob's influential work on values gives some idea of the complexity of research inherent in making scientific comparisons of colleges.[1] Much has been written on the subject, as the bibliography shows, but there is a dearth of literature reporting the results of research and experimentation in this area. By necessity, then, the authors have concentrated their attention on the problems and unanswered questions growing out of the past two decades of experience in providing general education courses within the complex university setting.

II. THE POSITION OF GENERAL EDUCATION IN THE COMPLEX UNIVERSITY

There are many difficulties involved in the examination of general education in the complex university.

The subject matter is a residual category. It is easier to ascertain whether a carpenter can measure properly or read a blueprint than it is to find out what else he can do, or what kind of a man he is. It is easier to ask whether a student can work with matrices or speak and understand the Russian language than to ask whether the mathematics major has any sense of a language or culture other than his own, or whether the area specialist has a sense for making abstract propositions and the ability to handle them systematically.[2]

The level of integration in student programs differs. Specialized sequences of courses and majors can be compared much more easily than can the immense variety of core or general education curricula. Is it even possible to compare a program of super-integrated required courses based on a list of distinguished readings with a program consisting of the optional selection of a given fraction of hundreds of courses

open for non-majors?

The fundamental assumption made by colleges in the "distribution" requirement is that all courses grouped under a heading such as "social science" or "humanities" are somehow equivalent to one another. Yet in what serious way is geology the equivalent of physics, chemistry of geography, philosophy of psychology, anthropology of economics? Nevertheless, these subjects are treated as though they were readily interchangeable in making curricular choices for an individual student. Even if one were to take an entire disipline as the organizing focus for a student's program, one would discover radically different emphases. Would two history majors, for example, one taking his breadth requirement in geology, geography, philosophy, and economics, the other in physics, chemistry, psychology, and anthropology, really have equivalent experiences in general education? J. W. Carson[3] provides invaluable insights into the history and complexities of this particular problem.

Treatment by advisers, teachers, and by the students themselves differs. There is no agreed-upon ordering of experience in our present educational system. "Breadth is most commonly regarded as enforced contact of the students with arbitrarily and variously defined groups of disciplines."[4] Usually, the student meets his non-major requirements piecemeal and in no particular order. The impact of these studies is

exceedingly difficult to evaluate except in summary fashion, and then only by using a shotgun measuring device such as the Graduate Record Examination or by depending on general impressions of the student's overall competence. Even within a given division of a university, these optional courses are generally not taught in a consistent fashion based on a common theory of knowledge and of learning. In the humanities, for example, the subdisciplines usually stand alone and demonstrate only minimal awareness of each other,[5] save perhaps for co-existence in the same century or region. The non-major courses are those most frequently skimped by a student because they appear to be of less importance to his future career. Yet it should be pointed out here that about one-third of students going on to graduate school shift their field of interest away from their undergraduate major.

The effects of general education are confounded by myriad factors. It is difficult to determine what a student has learned on his own, or from family discussions or other personal experiences, and what he has learned from his nonspecialized undergraduate training.[6] Also when some of the subject matter of the interdisciplinary programs is covered in later courses, it is difficult to portion out the contribution the integrated courses might have made to the more specialized study. Can we possibly agree to examine only the courses least related to a student's later

work in assessing the effectiveness of general education? And should the researcher take into account another of the confounding factors of general education? That is, that specialized courses can be taught in a general way.

The vanishing sample. Since nonspecialized courses are often grouped in the first two years of college and student attrition is heaviest during these years, the teachers of nonspecialized courses may find a far smaller proportion of their students graduating than do their colleagues who teach only upper-division courses. How can the impact of courses and teachers on these vanished students be assessed?

III. APPROACHES TO THE PROBLEMS OF GENERAL EDUCATION

As can be inferred from our previous discussion, our task is to choose useful focuses for inquiry, to raise questions rather than to report findings, and to point out usable approaches for researchers. General education is so varied, so complex in its relationship to educational philosophy and institutional organization, so intricately a part of undergraduate life, and so responsive to staff self-definition and structure, that we are obliged to simplify the bases of analysis if we are to improve our perception.

We shall deal with problems confronting ordinary liberal arts colleges within ordinary universities, with ordinary faculties, and with ordinary undergraduate students coming from ordinary secondary schools. Our attention will be devoted mainly to the freshman year, with a special emphasis on the role of the teaching assistant. Raushenbush,[7] for one, has persuasively demonstrated in widely different settings just how critical the freshman year is in determining the student's basic orientation to college.

Most liberal arts colleges in complex universities (for simplicity called "university colleges") have rather different problems with undergraduate education than do colleges in universities like Columbia and Berkeley. They have neither the highly selected student body nor the glittering graduate departments. Similarly, they are not plagued with the problems of advanced placement.[8]

We shall follow two approaches: first, that of "content" (the epistemological and pedagogical approach); and second, that of "context" (the institutional and functional approach). In the "content" approach, we must examine knowledge, the knower, and knowing, primarily in the humanities, natural sciences, and social sciences. Composition, mathematics, and foreign languages will figure only as they are relevant to more general questions. In the institutional approach we shall consider the college's relationship to its university, various aspects of student decisions, procedures influencing freshman year programs, the staffing of general education courses, and in particular the role of the teaching assistants.

The Content Approach

Knowledge. University organization reflects the nature of knowledge both as it is implicitly assumed and explicitly proclaimed. Evidence of this is the manner in which the explosion of knowledge has

been institutionalized by the expansion of existing departments, by the restructuring and regrouping of existing specialties, by the proliferation of bureaus and institutes to accommodate newly burgeoning areas of knowledge, and by the adoption of schemes for simplification; for example, the general systems approach which will permit knowledge to be combined in new ways.

These changes lead us to many questions. For example, are there many paths to discovery or is there only one royal road? Are we to subordinate less favored disciplines to favored ones, or shall we assume the equal importance of each field of inquiry? Is intellectual growth a linking up of different domains and instrumentalities of learning, or must each discipline strive to incorporate within itself as much as possible? (Should biology, for instance, have its own historians and philosophers of science and its own mathematicians to join its biochemists and biophysicists?) Is, as Bell suggests, some knowledge (like mathematics and language) sequential and sought directly, some (like literature) concentric where habituation and growth of experience foster alertness and sensitivity, and still other knowledge like that of networks of interrelationships, which demand a capacity to incorporate more and more factors into one's understanding of man and society?[9]

Specifically, is the undergraduate general education program to be

conceived as a miniature model of the complex university? Or is there an organization proper to it with its own ordering, its own sequences, and its own levels of integration of subject matter? How does the general education program interact with disciplines--like history and mathematics--which seem least responsive to change? How does it interact with disciplines like economics, which claims generality of explanation, or with politics and psychology which claim special relevance? Are disciplines like psychology and anthropology, which appear to be torn between their scientific role and their conception of themselves as an art, forming the basis of a new synthesis? Is philosophy combining with art, politics, and religion, thus furnishing these diffuse and controversial subjects with a structure for orderly discussion?

The Knower. The organization of knowledge in a university college aims primarily at the growth of knowledge in the individual student. Muscatine asks that "care for the needs and excellence of a given student supplement the department's attention to the excellence of a given subject."[10] What then are the current assumptions about learning? Is knowledge one or many? How is knowledge acquired? To what extent does its acquisition depend on the student's capacity, his zeal, his initial experiences? How is the student affected by the state of a given subject, by the influence of his peers, and by the academic climate within the university?

How is the student viewed by faculty members and by administrators? Is he thought of as an avid consumer, a bored dilettante, a potential peer, an encumbrance, or as free help? Are his intellectual powers, his capacity for virtue, and his finding and forging an identity important facets of his education? Or, are his intellectual powers the only proper concern of the institution, the rest a matter of individual conscience and energy? To succeed in college, which particular skills does the student need? Is his readiness for college a subjective matter, or can it be favorably affected by his parents and secondary school teachers? Is the pursuit of knowledge for its own sake something which derives from the college experience? Is joy in learning a legitimate expectation or a miraculous gift? Whose doing is the knowing? Who is the prime agent of knowledge? Is the struggle to understand, to be clear, to probe further, a joint endeavor of student and professor in required tutorial sessions, or can this issue be sidestepped with the assertion that professors are models whether they are willing to be or not and that their own lives are the best possible witness to the value of the intellectual life? What are the student's idealized personal images: the Renaissance man, the familiar of "two cultures," the person who is at ease listening to a stranger's conversation, the person who is flexible enough to change his orientation as his society is transformed? Is there any congruence between the instructor-as-model and the student's actual models?

In relation to these questions, several forms of analysis might be of substantial value in improving the present state of the learning process. For one, an analysis of college assignments and examinations, of letters of recommendation, and honors awarded might well permit the trained observer to map out the nonintellectual areas of student life which are under scrutiny, are reported on, and in fact are the passwords required by gatekeepers who permit entry into the new paths of academe, the graduate schools. Aanlysis of factors in a "college characteristics index" could bring out relevant clues to the institution's intellectual climate. It could show to what degree the students are involved in their work; the degree of saturation of the campus with art, politics, or social concerns; the actual value of tight scheduling and regular checking on student work (externalization of demands) as opposed to a climate of debate, of challenging cliches and slogans, of valuing the student's own intellectual and artistic achievements (internalization).[11]

Knowing. Nearly everyone would agree that knowledge and the person aspiring to learn (or know) must be brought together in the most effective possible way. How is education, then, assumed to happen? What kind of knowledge is allocated most time and resources? What sorts of knowledge are honored in institutions of higher education everywhere?[12] What knowledge is accepted as useful for only limited sectors of society, and what is reluctantly given temporary hospitality in the university? What

knowledge is considered basic and essential for everyone, and what is only fit for the well-trained and the well-motivated? What kinds of knowledge are seeking a clientele, and are searching for relevance in the modern world? What knowledge is turning away would-be apprentices?

How is the process of knowing nurtured in the everyday life of the university? Under the mounting pressures on the university, what important educational decisions are being made by departments with heavy service responsibilities, or by those with an important share of required undergraduate courses? Do departments set arbitrary minimum standards, demand rigid programs, tighten up on student excuses and incompletes? Or do they make changes in the courses themselves? Roos[13] has attempted to counter uncoordinated departmental responses to pressure by making a number of proposals. He suggests, for instance, that students should take courses which meet the prerequisites of several departments, that qualifying examinations should be given to students so that they may take advanced courses for breadth requirements, that students should audit difficult required courses before taking them for credit, that they realize that more work and a higher level of performance characterize courses open to graduate students, and that advantage should be taken of the more relaxed summer session for survey courses in the arts so that students can enjoy these courses more fully. He also advises students on ways to make themselves known to their instructors without being

obnoxious about it, and how they can extract worthwhile criticism of an "A" paper.

Some other pertinent questions in this area are these. If departments are obliged to increase their courses, do they offer the standard course only to honors students? Do they accommodate ordinary students by TV courses or in any other markedly different ways? Do they allow auditors to qualify for more advanced work by passing special examinations? What learning situations are subjected to the greatest pressures for change, which pedagogical techniques? What are the human and financial margins for innovation and error? Where and when is there freedom in courses for the students' personal responses? Contrarily, where are the limits clearly marked? For example, is course content relatively fixed and the instructional approach a matter of personal taste, or is pedagogical technique sacrosanct, but a wide variation in content permissible? It could be argued that the drastic reduction of student feedback (appointments with instructors, term papers, and special projects) is the price that must be paid for maintaining the high level of lectures, the currency of reading lists, and the revision of examinations.

Pertaining to the student's exploration of the world of ideas and his intellectual self-discovery, Rauchenbush[14] documents the importance of having them write papers early in their careers. Dressel[15] insists on

the importance of high-caliber instruction for courses that require frequent writing, oral presentations, and discussion--the very types of courses which Muscatine[16] finds are most often relegated to teaching assistants.

What impact then do these faculty survival measures have on general education? Is this the area that suffers most, where the reduction of faculty time is most severe? Is general education, on the contrary, an area whose marked stability allows innovative energies to be directed elsewhere? Does this very stability reflect stagnation and neglect or a sign of confidence in and esteem for reliable and worthwhile work?

In the various collegiate fields we can distinguish four levels of learning and involvement that are sought for undergraduates:

1. Sometimes the student is expected to be able to achieve insight into, and develop sympathy with creative work in his field. He may be expected to develop some sense of what it is like to play the key role in an endeavor, such as the task of poet, research scientist, or historian. Here the student is seen as a potential colleague; the field as capable of interesting the newcomer; the key role as accessible to him. This means that the vital experience of discovery, diagnosis, and creation of a new work is held to be in some measure within the reach of undergraduates. This approach is typical in the liberal professions at

the postgraduate level. In academic disciplines which involve heavy responsibility for others' welfare, facsimiles are invented for training purposes. Examples are the case history approach to law, simulation as an approach to international politics, and role playing as an approach to social psychology.

2. In other situations insight and sympathy are thought possible but the student is seen as the sympathetic spectator, the critical consumer, the sensitive but peripheral participant. Here it is considered important that he witness the development of a theory, or the painting of a portrait, or that he follow the process of planning a research project so that he can see the intermediate steps before examining the final results. He is not expected to be able to make the model, or paint the portrait, or design the research. On the other hand, he is expected to have a sense for the alternative designs, the choice of tools, the points of crucial decision, the degrees of approximation that are possible, and the appearance of the work (including that of the artist) at its various phases of creation. His knowledge is vicarious and his vocabulary extensive. His aim is the understanding of the other's achievement.

3. On a third level, knowledge of the field and sympathy for creative work may be expected of the student but not depth of insight into the creative process itself. Here the field is defined as too vast in scope, too complex in form, too subtle in distinctions to be accessible

to the neophyte. At best he can be given an up-to-date mapping of the area with an occasional blow-up to illustrate some of the complexities underlying the full-scale model. He discovers the vastness of knowledge; he sees that any advance in knowledge requires an immense initial tooling in the basic disciplines (languages, mathematics), and that, fundamentally, personal experience is an irreplaceable element in the process of understanding. Here the researcher or the artist is the sole possessor and master of insight, of the process, and of the product. Only his peers are capable of being his judges.

4. Still another level of learning and involvement assumes some knowledge of the field, but no sympathy for creative work except in the student's own terms, and no real insight into the key roles or experiences in the field. Essentially, the purposes of this level of learning are to delimit the area, to get across major classifications (for example, periods, styles, and themes), and to acquaint the students with key figures in the field and with contemporary examples of completed work. The student develops a basic vocabulary which he can use for classifying new information (people and institutions) and that can be referred to if he needs more information.[17] A blank part of the map of learning has been filled in. It is now marked "unknown, owned by _____."

It can be said that the more modest the level of faculty aspiration the more external and controllable the medium (text, workbook, quiz),

the less well-trained the instructor needs to be and the easier it is to multiply the sections of a course. The central question for the educator is how to elevate the teacher's level of aspiration for student learning while at the same time multiplying the number of such high-level courses. The fact is that people capable of functioning at high intellectual levels are scarce.[18] What combination, then, of scarce expertise and available but more modest teaching talent can make possible the high staff morale that is typical of the best teaching apprenticeship? For is high staff morale necessary to permit learning on the job, to allow a review of errors as well as of triumphs, and to encourage the testing of ideas and criticisms? In such a tonic situation, a set of teachers can work together and teach far better than any of them could teach alone.

Clearly, we must examine carefully the question of levels sought: which levels of knowing are thought to be attainable? Which are thought to be appropriate, or minimal? And, finally, who is to judge? A tension presently exists between the desire to do justice to the subject, to convey the best possible insight into what the discipline is really all about, and the conviction that conveying this sort of understanding requires a first-rate person whose time and energies ought to be reserved for people who are already committed to the field. Yet, it is only the first-rate teacher who can be trusted to find valuable simplifications and shortcuts, and

to translate fundamental insights into ordinary language. More than anyone else, he can sense the kernel of genuine understanding in the neophyte's unconventional phrasing.[19] More often than not, it is he who can buoy the student throughout months of slogging, particularly by his making statements implying personal knowledge of the student and his problems and interests.[20]

The Context Approach

As the content of general education reflects the university's organization of knowledge, its concern for undergraduates, and its pedagogical aspirations, so too does the institutional context within which general education takes place. The university's management of size and growth, its university-wide services and procedures, its traditional relation to its liberal arts college, the college's autonomy, its faculty and departmental organization, the roles of its teachers, graduate students, and undergraduates, all of these express the university's commitment to undergraduate education. General education, then, is an important curricular area where the university's position on both knowledge and its acquisition is made explicit.

The university and its college. University colleges differ in size and in rate of growth. They can be broadly divided into those with a distinctive full-time residential campus culture and those which are huge commuter institutions; yet they resemble each other in the monotony and

utilitarianism of their curricular offerings and in their carapace of formal rules relating students and faculty.[21] Some Ivy League colleges dominate their respective universities because of their distinctive student bodies which are quite different in social origins and aspirations from students in the professional and graduate schools. On the other hand, state universities often draw both their undergraduates and advanced students from the same population; indeed, in the state universities most graduate students are also graduates of their own university college.

The role assigned to general education in the university college. Is general education the pace setter, the image maker, the most memorable element of a common collegiate culture? Or is it the least esteemed, the most poorly handled, the shabbiest experience of an undergraduate's career? If general education is a recognizable entity within the university, widely shared by undergraduate students, it may well have a defining function for both the college and the student. If it is merely a collection of diverse course offerings, however, its function may simply be supportive and accessory, and student identity and commitment will be grounded elsewhere.

Nevertheless, it is possible that the newly established university college[22] can make its distinctive and innovative contribution[23] in the area of general education. To do this, the college's method of combining

the fields of knowledge as well as its emphasis on certain disciplines may be unique. Communications or cultural anthropology may serve as an organizing principle; and field experience or community work may be built into a novel and effective program.[24] The general education component of the university college may also be the focus for new teaching endeavors since the student's academic career is not thought to be in jeopardy at this point. Universities may combine dormitories with a special subset of general education courses, such as art, or the study of a particular language or region to establish distinctive student subcultures.

General education may also shape the final shared experience of the college senior, demanding of him his most intensive work and his most extensive effort at integration of knowledge. It may give him his first real opportunity to face for himself the key questions of personal style, of work commitments, of his connection with other generations, and of his own personal entry into the larger society. Dressel[25] suggests that we closely examine such present integrative devices as the senior comprehensive examination, the synthesizing seminar, the bachelor's paper. Are these instruments carefully enough designed, are they distinctive enough experiences to warrant satisfaction with the college's general education program?

Most general education programs are offered early in the undergraduate's career, particularly in his freshman year. Ideally, the coming together of the individual student and his institution should stimulate the student's urge to explore and to comprehend this new and more varied context. For its part, the institution in its interaction with the freshman, assesses the newcomer's essential skills and his suitability for full acceptance into a new academic world. The freshman year is a year of initiation, decision, and belonging.

IV. THE FRESHMAN YEAR

The freshman year is a critical year for the student. It is a year of adaptation, of self-doubt, and of challenges to be met. A university college defines itself to the new student as either rigid or responsive to his individual interests, as either an adversary or an ally. What college is all about is made clear to the student by the quality of courses offered him, by the demands that are made of him, and by those who speak for the university. Freshman general education may serve as a springboard for other academic endeavors. It may be the reward of the diligent, or the playpen of the idle. One measure of the morale and status of general education on a university campus is the extent to which its curriculum is known to students and faculty and its aims and efforts taken into account by them. The aims and effectiveness of general education may be easily negated when the concepts, readings, or knowledge brought to a particular class by a student are shrugged off as irrelevant. The student may fail to grasp the differences in aim, technique of discovery, level of precision, in rigor or abundance of proof between a general education course aimed at examining the

development of Western thinking about liberty and a course in British Constitutional history, and shrug off the closer-grained advanced course. Wishy[26] warns of such anti-intellectualism which despises expertise.

The year of testing? Is the freshman year designed as the time for intensive personal contact between student and staff? Can this period of time, while primarily aimed at establishing the academic pace, also allow for evaluation of the student's potential, the adjustment of his tasks to his own needs and competence, and for the casual, safe exchange of information about university life, self-discipline, ambition, and potential confusion? Or during the freshman year is the student simply expected to show his qualification for further academic training by successfully demonstrating proficiency in writing and mathematics and by passing examinations in several prescribed areas of knowledge?

The year of choice? Is this the period during which the student most needs a map of the university, an organizational chart of its departments and services, an accurate listing of the requirements for courses open to him, and a reliable and accessible cadre of staff and student advisers to counsel with him? Or can we assume that the student easily and promptly will become acquainted with the many disciplines in the university and by himself make a maximally meaningful and appropriate choice of his future specialty?

The year of incorporation? Does the student now begin the arduous grounding in a discipline which after several years of hard work will earn him the right to speak competently and responsibly of larger problems and related learning? Or is this the time when the student most needs to participate in a common life, sharing professors, readings, classrooms, and residences with his fellow neophytes? Is this the time when a common vocabulary and a new set of allusions are forged, the heritage of the past incorporated, and the problems of one's own future faced? Or is this the time when the student embarks on a program that is designed to explore the major areas of knowledge and which when completed will allow him to orient himself realistically and appropriately to new advances in knowledge and to profit more fully from whatever kind of specialized work he may wish to enter later on?

Often the freshman student is scheduled into three, four, or five huge lecture classes, each backed up by smaller sections taught by teaching assistants. This initial experience gives him some information about his own aptitudes in various subjects, the sorts of lectures with which he can cope, and some indication of his competence at performing the kind of tasks demanded by teaching assistants. He may use this initial feedback experience to choose a more strenuous course in one field of knowledge, dropping courses (if permitted) in another area, and continuing low-level exploration in still others.

This trial-and-error procedure is often made more difficult for the student by offering him so many courses to choose from that the only sensible thing for him to do is to make a schedule which will at least conserve his energy and guarantee periods of free time. General education, if offered as a few coherent sequences of courses, gives both the student and the university a standardized situation within which both parties may come to grips with each other. This obvious advantage is lost if general education is presented simply as an array of unique opportunities open to each student.

It is important that the student's initial experience in a given area be as accurate and meaningful as possible. It is also important for the student to obtain accurate feedback on his own performance since he is almost certain to use his earliest grades as a crucial signaling system for his academic career: continue if grades are over C, discontinue if below C, shift away from C area as soon as allowed. This signaling system is further complicated by the fact that the student is expected to maintain a given overall grade-point average. Another hazard of this approach is that the student cannot retrieve a poor grade by repeating the course, or even by passing a more difficult course at a higher level. As a consequence, during his elective years the student is virtually forced to choose courses on the basis of his prospective grades in order to offset the poor grades received in his required courses. Thus, simultaneously

the freshman must cope with too large a field of alternatives and an imperfect feedback system. In addition, he often has to pay a heavy price for incautious exploration.

V. UNTANGLING THE SKEIN OF PROCEDURES

The freshman year provides an excellent starting point for researchers to analyze the network of procedures and de facto "definitions of the situation" inherent in a complex university. These procedures and de facto roles are made all the clearer when it is considered that colleges are having to confront and absorb an unprecedented number of new students. The normal homogeneity of freshman classes is shattered by the rearrangement of the division of labor among the colleges in the region, by changes in recruitment techniques and admissions criteria (to obtain a desirable "mix"), by new funds that are being made available for the education of the disadvantaged, by the burgeoning junior colleges, and by the classification and channeling of students on bases other than high school records and college admissions tests. It may be anticipated that some problems heretofore sorted out by traditional routines may need a very different approach when they become frequent. For example, what is the best initiation for the now more numerous disadvantaged student, or the first generation of college students from ethnic backgrounds?

Freshman year confronts the student with a succession of clear-cut

problems. The university must explain its policies and its ways to its new members both in officialese and in behavior. The broad collegiate requirements take precedence over the disciplines' more parochial language and customs. The facts of life of a student's education, the standards expected of him, and the aspirations he may entertain become clear to him as he discovers the rules and regulations which will define the limits of his explorations--the conditions of his survival and success in college. It is in explaining such standards and policies that the disciplines are at their weakest and the college at its strongest, for only the college is able to deal effectively with new students who have not yet been absorbed into the academic ways of the various departments.

We must ask how the students' general education is affected by their university's answers to these questions: (1) When and how are critical decisions made on selection and admission of students, their choice of first semester courses, their choice of a major, and the determination of their probationary status? (2) Who are the principal actors in these decisions--university officials (counselors), departmental personnel, or the students and their peers? (3) What are each of these principals' stake in these decisions? (4) What are the public, what the pragmatic, definitions of majors and of electives? What are the practical effects on individual lives of procedural decisions about courses other than those required for a major? When may these courses be taken? And

how many courses must a student carry to be classified as a full-time student?

Who shall decide? When a student's background is generally weak, he needs everything--breadth, depth, inspiration, and self-discipline. But what alternative paths are actually open to him? Does he perceive these paths as open or does he deal himself out? Upon what basis do his mentors proceed? Do they aim for depth in course work when the student shows genuine intellectual interest? Does the instructor attempt to exact high-quality work from a student at the very outset of his career, and does he encourage signs of quality whenever and wherever it appears? How does the student define himself? How willing (or able) is he to examine those areas of study that he perceives as tangential to his own interests and potentials? How many disappointments or reassessments of his chances can he (or his family) tolerate?

In some cases, will the student be driven to doggedly follow the catalog's suggestions for electives or will he assume initiative on his own? Is he not likely to become impatient with advice to pursue ways of satisfying requirements which would also allow him to continue his discovery of the intellectual life? His safety seems to lie in a sharp restraint of intellectual curiosity, in husbanding his energy so that every effort can be focused on courses which are defined (often prematurely)

as critical. In order to succeed, he is often pressured into early specialization, and thus any subsequent change of orientation is compromised by heavy investments in courses which may not be accepted for credit in other fields. To simply write off these semesters of disappointing work seems an unbearable risk to the student who may not yet be sure of the attractiveness of an alternative course. This play-it-safe, go-by-the-book strategy may lead the student to regret his commitment to a major field which he chose too early and pursued too wholeheartedly, or he may even drop out of school altogether rather than risk renewed frustration in another field.

Is it best for the student to be as tightly scheduled as a West Point plebe, or must he find out for himself that time not spent in class is mortgaged rather than free time? An explicit warning that four hours of study are needed for every hour of class time may be a legalism that frees the teacher's conscience, but it is no substitute for a student's actually experiencing the advantages of rewriting a first draft, of searching out obscurities in a text, or of discovering his own prime time for productive work.

If the student is invited to be his own curriculum manager, as the Muscatine report[27] suggests, then how can the college best equip him with the knowledge of himself and of the options available to him? Can

the student be assumed to know himself and his needs sufficiently, or does he need expert help in discovering his own potential and then living with this discovery? Is the would-be doctor's best counsel to be discouraged implacably by semesters of failing grades in the basic sciences? Is the shy student to be thrust into an intimate tutorial situation, or is he to be allowed to fade into the huge lecture class? Is the facile student ever to be forced into situations which will seriously test his estimation of his own performance? Should attempts be made to acquaint every student with alternative kinds of intellectual endeavors? Is the student's search for counseling and guidance to be left to rumor, casual encounters in dormitories, and the recommendations of the most aggressive or charismatic of his advisers or peers?

VI. WHO SHALL TEACH?

Whatever its function and format, general education in university colleges everywhere faces the common problem of staffing.

The university's decision as to how knowledge is to be organized, increased, and transmitted is most clearly portrayed in its staffing policy. The kind of person whom it charges with undergraduate education very clearly points to the level of attainment that undergraduates will be allowed to achieve in insight, in creativity, and in participation in crucial experiences in the various fields of knowledge.

It is important, then, that we find answers to these basic questions. In practice, whose concern or responsibility is general education? Is it the province of a particular set of teachers, or is it a concern widely shared by the whole faculty?

Who in fact gets recruited into teaching undergraduate nonspecialized courses?[28] Who is actually most in closest contact with undergraduates? And precisely what of contact matters?[29] The institutional trend is clearly toward more and more specialization, but there are bound to be

resistance and counterpressure from the individuals caught in this trend. It might well be that general education is the institutional form within which many of these counterpressures take shape and test themselves: for example, in a countercurrent where the traditionalist and the innovator meet at the highest level in a conscious pedegogical effort to broaden the scope of undergraduate courses.[30]

In assessing this problem, we must ask how can competent people be found who are trusted by their colleagues to educate undergraduates in work other than their majors? Thus far, colleges have relied mainly on three means: volunteering, drafting, and the hiring of mercenaries.[31]

The volunteer. Volunteers for general education courses are usually people who, it is assumed, will teach well what they know at first hand and what is interesting them at the moment. Enticement is the key. In practice, this usually means: (1) that anything such a qualified staff member willingly does with undergraduates is valuable (therefore, make room for him and let him invent what goes into the catalogue rubric or course description); (2) that any coordinated effort willingly undertaken by faculty from different disciplines is good (therefore, welcome any such collaboration and try to multiply its instances); (3) that a course which cuts across divisions, such as the philosophy of science, or "science and society," may attract volunteers; (4) that an attempt is

made to minimize the onerous parts of the task by promising volunteers that the arrangement will not become permanent, and that policies will be established to protect interested staff members and their students from reprisals (for example, students would not have to repeat courses, however exotic, taught by volunteers).

The draftee. The drafting of faculty members to teach general education courses assumes a great deal of "colleagueship"; that is to say, given a good course, colleagues are interchangeable. The assumption is that any staff member can teach any undergraduate course in his discipline and any general education course in his division; further, that any staff member can read any book prescribed for the course and, with some help from colleagues, discuss it intelligently. But the draft method also assumes that some coercion is necessary, and it attempts to handle this coercion in various ways: (1) by making the teaching of non-majors the initial assignment of beginning teachers, and by making proficiency in this assignment the prerequisite for escaping it later on; (2) by rewarding the draftee with a compensation assignment or time off for research; (3) by defining the teaching of undergraduates as a vital part of the draftee's own advanced education; and (4) by allowing the draftee to avoid close contact with undergraduates through maximizing the use of the magisterial lecturing role, and thereby minimizing the time exacted of him by giving him an established, surefire course that can be handled

with minimum personal involvement, no new organizational arrangements, and only the briefest of faculty preparation.

The mercenary. The use of mercenaries for the teaching of general education courses basically assumes that the regular faculty does not want to teach undergraduates. It also assumes that the use of teaching assistants is not a feasible solution, and that the staff does not want a permanent set of faculty members given the task, who, though they may be judged competent to handle the specific courses involved, are not desirable on the departmental or graduate faculty. Several options are open. (1) Graduates from good universities of lesser rank can be recruited to teach undergraduates, but a high turnover can be expected. In the same vein, the creation of a postdoctoral role which includes an informal "colleagueship" with outstanding specialists will help in attracting high-caliber recruits. (2) Another method is to recruit semipermanent staff members from among those on the campus periphery, for example, faculty wives, members of local minority groups, retirees, foreigners, and men with advanced degrees working in industry.

VII. THE TEACHING ASSISTANT

In situations of expansion within an existing university college an increasing share of the undergraduate teaching load is shifted to teaching assistants.[32] The ordinary teaching assistant has a richer educational experience than his students. With more years of studies he will have met more teachers, turned in more assignments, and will have worked through a greater variety of books. He may have been an undergraduate in a different institution and hence be familiar with at least one other example of undergraduate education. Hopefully, he will have been a good student who has received some personal attention from an interested professor. If such is the case, he can at least choose to imitate what seem to him the most rewarding of his own courses, and the most helpful of his own mentors may serve as his model. If he works with other teaching assistants who have had different undergraduate experiences and whose departments make different demands on them, he may glean still more food for thought.

He may find that teaching an introductory course provides him with a challenging opportunity to review his own knowledge. He will

be able to glimpse the lag between knowledge at its source and that same knowledge as assembled for beginners, between knowledge presented as advancing a line of hypotheses and knowledge that is accepted and firm. If he is attentive to his students, he may perceive still another form of the knowledge he endeavors to transmit--that is, knowledge as it is perceived, or better, rediscovered by another. When the implications of knowledge are not immediately incorporated in the thinking of his students, his disappointment may cause him to reflect on their inertia and lack of experience, or on the reasons behind their misunderstanding. But what epistemology, what pedagogy underpins these reflections?

The teaching assistant's lot varies considerably in relationship to the independence that is allowed him and the training in teaching that is offered him. Mascetine[33] and Murray[34] are both persuasive in stressing the importance of preparing graduate students for college teaching. A senior professor, working with a teaching assistant, may operate in one of several ways. (1) He may give him a course which is relatively foolproof and which relies primarily on tested readings, such as Columbia's "Contemporary Civilization," and set the examinations. (2) He may work closely with him on an ad hoc basis, paying attention to problems as they arise, working closely with him on grading standards, checking on all A's and all failures. (3) He may allow him to invent

an approximation of a basic course if he demonstrates a talent for doing so, discussing such matters as reading selections, assignments, pacing, and grading. (4) Once the assistant has passed an advanced examination in the area, the senior professor may encourage him to teach an independent version of the standard course in another setting (for example, in an adjacent university, or in a different school of the home university). (5) Or he may arrange to team the assistant with another graduate student from an adjacent discipline in order to have them jointly teach an interdisciplinary sequence, thereby providing his assistant with the advantages of both colleagueship and a more extended course to plan.

Too infrequently do professors make available to their teaching assistants alternative examples of texts, course outlines, examination questions, and assignments. Still less often do they give them access to outstanding discussion groups. Still rarer are discussions of the historic educational experiments in a given discipline or of good "shop" books such as those included in Benezet's lists.[35]

Since the teaching assistant is likely to play an important role in the future of general education courses, we must learn far more about him. For instance, what is the teaching assistant's career line? How is he recruited? Is the market allowed to regulate supply and demand? Are research projects permitted to outbid departments with serious teaching

needs in order to obtain a potential assistant's services? Is the recruitment of teaching assistants left entirely to the ingenuity and entrepreneurship of individual professors? Do only first-year graduate students teach? What are the respective roles of reader, teaching assistant, and teaching associate? Is the most successful teaching assistant the one who assists the most prestigious professor, the one who is versatile, or the assistant who teaches in the most advanced course?[36] What are the critical components that make the teaching assistant's role worthwhile? Are they independence, responsbility, control over course content, or are they salary, access to the regular faculty, library privileges, or prerequisites such as individual desks and free coffee? For his future career, how does the teaching assistant's marginal role compare with the role of the research assistant? Does the teaching of undergraduates become defined as the role of the teaching assistant? What becomes of the most effective teaching assistants? Do former teaching assistants behave in any unusual way toward their own assistants?

Is there any trend in routinizing the use of teaching assistants for undergraduate education? What interests, if any, are served by such a trend? What differences in the quality of undergraduate education stem from the use of teaching assistants rather than recent graduates from other schools or "mercenaries" from the local community? What is the impact of assistants on other graduate students, on departments,

on campus life? And how are such marginal people viewed by the regular faculty, by the administration, and by the accrediting agencies?

VIII. CONCLUSIONS

Muscatine, a professor of English, favors the pragmatic over the theoretical approach to general education, saying "we have often found that we could easily agree on the same practical measure from rival philosophical positions that themselves might have been the occasion for long and inconclusive debate."[37] On the other hand, Bell, a sociologist, asserts that "it is much easier, and more the academic habit, to deal with ideological questions than with organizational difficulties, and many of the problems of the general education courses, which are actually rooted in institutional dilemmas, have been masked by argument about intellectual content."[38] It may be noteworthy that Muscatine is almost entirely bent on institutional reform, and that Bell's chief emphasis is almost entirely on rethinking the curriculum. Each perceives the overwhelming, indeed stultifying, difficulties in his own realm of expertise and would attempt a breakthrough in another sector.

General education in the university college, then, faces us with controversies so fundamental that one can wonder if everyone is discussing the same subject. The courses that demand the most time of the

undergraduate student are those most criticized by students, those which no one really wants to teach. They are the courses that departments have the greatest difficulty staffing, but which departments are very reluctant to relinquish. These are the courses that carry the broadest influence of a college education, and yet they are the ones where pedagogy is the least innovative and where the administrative procedures are the most objectionable. They are commonly found to be the dullest and most superficial of all courses, despite being taught by teaching assistants whose energy is not yet undercut by disillusionment, and who are themselves engaged in what may well be their peak experience in personal research and in their most thorough review of their field.

It is evident that controversies and disfunctions of such magnitude call for both study and action. On the one hand, we need to examine what is known and knowable in at least the three broad areas of knowledge--the humanities, social sciences, and natural sciences. Discerning in each of these areas the concepts which underlie their several disciplinary formulations (such as <u>form</u> for humanities, <u>relation</u> for social sciences, and <u>matter</u> for natural sciences), and recognizing their principal common ways of knowing (experience, experiment, and analysis) are basic to the discovery of a pedagogy appropriate to the collegian. On the other hand, we need to experiment with institutional structures and procedures, particularly in the areas of faculty recruitment and development.

Competent staffs must be developed of people willing to work with undergraduates on these sorts of ideas. These faculties must be related to the university structure in ways that will incorporate, rather than nullify, their contributions.

FOOTNOTES

1. Allen H. Barton, Studying the Effects of College Education: A Methodological Examination of Changing Values in College. New Haven, Conn., Edward W. Hazen Foundation, 1959.

2. Earl J. McGrath, "College Curriculum: An Academic Wasteland?" Liberal Education, May, 1963; "The Liberal Arts Today," College and University Journal. Winter, 1966.

3. J. W. Carson, "The Teaching of History in the Twentieth Century." Journal of Higher Education. October, 1963.

4. P. L. Dressel, "Curricular Theory and Practice in Undergraduate Education," North Central Association Quarterly. Winter, 1966; "Look at New Curricular Models for Undergraduate Education." Journal of Higher Education. February, 1965.

5. What would be the institutional implications (in loss of time, withdrawal of valued personnel, invasion of academic freedom, or increased sense of administrative interference) of standardizing even successful undergraduate courses so that other relevant factors such as teaching style; homogeneity of sections; matching of students and teaching assistants on acceptance of pressure and rate of pacing could be examined? Indeed, what intellectually demanding situations are relevant and are accessible to systematic inquiry? Which of the usual institutional arrangements can be manipulated even for the purpose of bettering the undergraduate fare?

6. Entrance examinations may tell us something of the students' vocabulary and reading skills. We may ask for lists of memorable books, periodicals, plays, and movies that they have read or seen; but these do not tell us much about their curiosity, their ease in argument, their relative capacities to suspend judgment, or their knowledgeability about work and politics. Information of this kind and quality about students remains largely unavailable to the college teacher, as do their expectations of him, of his discipline, and of the college itself.

7. Esther Raushenbush, The Student and His Studies. Middletown, Conn., Wesleyan University Press, 1964.

8. Daniel Bell, The Reforming of General Education. New York, Columbia University Press, 1966.

9. Ibid.

10. Berkeley Academic Senate, Education at Berkeley. Report of the Select Committee on Education (Charles Muscatine, chairman). Berkeley, University of California, 1966.

11. George G. Stern, Scoring Instructions and College Norms, Activities Index; College Characteristics Index. Syracuse, N.Y., Psychological Research Center, Syracuse University, 1963.

12. Thinking, reading, speaking, and writing seem to be the only universally acknowledged necessities in college education. But is each discipline separately responsible for its particular logic and cosmology, ethics and epistemology, metaphysics and history? Where will "hard" reading be sufficient and where is sensitivity needed as well? Is the reader expected always to sense the relevance of material, or in some areas must the consequences of thought be explicitly pointed out to him. In which disciplines are the reports, the instruments of persuasion, and the routine communications of discovery and insight couched in the specialist's language and rhetoric? And where is standard eloquence and clarity demanded?

13. Philip Roos, "How to Get an Education Despite the System." In The Slate, Supplement to the General Catalog, No. 1. Berkeley, University of California, 1963.

14. Raushenbush, op. cit.

15. Dressel, op. cit.

16. Muscatine, op. cit.

17. Some disciplines claim that any exposure of students to any learning situation is better than no exposure. Others claim that no exposure is far better than initiation of the student by an incompetent "Renaissance" man. The arts seem to predominate in the first category and the sciences in the second. Yet laboratory work is in their eyes an experience analogous to beholding a Ming vase, hearing a symphony rehearsal, or reading

Beckett. Some disciplines embrace vicarious experience, while others are uneasy about robbing time from first-hand experience. For some, relevance is equated with timeliness. Those who unabashedly argue the mishandling of Athenian alliances in the Peloponnesian War, or who would rekindle the opposing ideologies of the French Revolution, and even those who, while impatient with Aristotle or Newton, would call Marx relevant, are challenged by iconoclasts who want the time for a closer look at Gueverra or Theobald or Harrington.

18. We have seen that eminent scholars have been found who were willing to work on the blueprint for reforming high school science and mathematics courses, only to later discover that few teachers could carry out the proposed experiments and discussions leading to discovery. The scholars had then to invent the pedagogical approach and laboratory equipment as well. Do we not have similar disfunctions in undergraduate general education? Are those who are in de facto charge of undergraduate instruction capable of innovation, or re-synthesis, of choosing crucial experiments? Can they give an adequate enough sense of their field to enable their students to make a responsible choice of major?

19. The establishment of objective criteria which will allow ordinary men to better match student interests and potential with the various fields of knowledge is needed most in universities where the students are numerous and heterogeneous and the university is itself mobile. But what do we know about the quality of knowledge "acquired" in college? What operational definitions, for example, do students give for concepts such as "abstraction," "induction," "process," "research," "meaning," "discovery"? Can students argue the viewpoint of an author whose theories they do not happen to espouse? Can students carry out their own research on problems devised by themselves? What topics are chosen, what methods used, what understanding of other people's thoughts are shown in work done by students on their own initiative (such as articles for student press)?

20. Can the teaching assistant give advice, make a judgment implying personal knowledge even if he is de facto in the closest teaching relationship with undergraduates, and, more than ever before, is entrusted with introductory service and nonspecialist courses? What is the extent of his credibility? What is his impact on non-majors? What is his role in defining the discipline, in selecting students for the discipline?

21. See Stern's (op. cit.) comparison of the university college with the liberal arts college and the teacher's college along dimensions such as student aspiration levels, student dignity, academic climate, academic

achievement, academic organization, and vocational climate.

22. A critical problem for the new university college is its relative autonomy; it must be assessed if only to understand and gauge the pressures exerted to make its innovations in general education regress to the mean. Does the new unit have its own identity? Does it make its own policy? Does it hire its own personnel? Does it have its separate budget? Does it grant its own degrees? Is the college expected to share staff with other units? Does it have to justify its degree requirements to other units? Is the college's staff to some extent on loan? Does its staff have full membership in the larger faculty? Are members of its faculty promoted on a parity with other faculty members? In the well-established university college a critical question is whether its rationale includes explicit organizational arrangements for general education or whether it is assumed that undergraduate general education is a residual category organized and controlled by a set of traditional principles about depth and breadth in degree requirements.

23. Where innovation is the task of the disciplines or an institute, general education can serve as the thread of continuity with academic tradition and as the link to other colleges. A sense of fitness can be honored by instituting a classic general education course, such as Contemporary Civilization. This may be particularly appropriate if other parts of the curriculum are exotic or utilitarian.

24. In new situations it might be worth noting what sorts of disciplines the innovators belong to: English, philosophy, and history? What sorts of disciplines furnish the innovating staff: humanities, hybrid disciplines like philosophy of science and history of ideas, near-acceptable disciplines such as communications, disciplines which are new and promise a great deal such as non-Western Civilization? Which disciplines furnish people with a high turnover (voluntary, or not), which ones with great staying power? From which disciplines is the administrative apparatus drawn? Whose vision shapes the place at birth? What initial structural arrangements are resistant to change, and which give way relatively quickly: those which involve recruiting a unique staff which is likely to coalesce? those which involve new, or more than usual contact with all undergraduates? those which take the time of everybody? those which are not countable as credit hours, or in work load? those whose rationale is not readily understood? those whose staff looks academic, those who recruit locals or younger men or members of minority groups?

25. Dressel, op. cit.

26. Bernard Wishy, "General Education in Extremis: How Can it Be Restored to Health?" Journal of Higher Education. May, 1963.

27. Muscatine, op. cit.

28. These courses have one feature in common. They are the lot of those under pressure: the teaching assistant who carries a full course load, the instructor who has not finished his dissertation and the assistant professor who has not yet been granted tenure.

29. Is it extensive, intensive, early? Which, if any, of the following teachers are the students' models: the visible ones, the eminent ones, the ones of low status who are accessible, those who are in their own area of specialization, or, those with familiar backgrounds?

30. Is there any pattern to the transformation of titles or content of courses offered over the years? What has been the fate of interdisciplinary efforts? Why? How do faculty members rate crossdisciplinary periodicals and periodicals of criticism in comparison to professional journals in their own field? Do they read in fields distant from their own? Where do they send their children to be educated? And do they push their children toward early specialization? How do they evaluate the work that has been done in their discipline in recent years? Which trends do they regard as valuable and which as a waste of time or of doubtful promise? How do they evaluate various graduate departments in their own discipline and in related disciplines? Which disciplines do they find most relevant to their own? What are their bases for judgment?

31. There are other means. The college can grow its own. It can rely on its own graduate students, but this presents a problem if these students have never studied at another university. It can rely, in part, on indentured service, i.e., by bringing over foreigners and requiring them to teach undergraduates until they discover their predicament. Or the college can coopt and retrain people, e.g., those from overcrowded or unlikely fields, and obtain for them graduate fellowships in fields more in demand.

32. Our own preference would be for volunteers whose academic training matches that of the staff of the appropriate local graduate departments and who would be specially qualified by having some advanced training in a discipline other than that of their doctorate, and who would have experienced spirited quality undergraduate work in an independent liberal arts college, preferably one committed to the development of outstanding

general education sequences. Such people can be found if they are given a self-respecting role and if they are not blocked by rules about nepotism, or conventions which bar more than token participation by women, Negroes, or members of lower-status religious groups.

33. Muscatine, op. cit.

34. R. K. Murray, "The Effect of a University's Graduate Program on its Undergraduate Program." Journal of Higher Education. May, 1961.

35. Louis T. Benezet, "Once More Unto the Breach." Liberal Education. March, 1960.

36. Under what circumstances does his work become an apprenticeship?

37. Muscatine, op. cit.

38. Bell, op. cit.

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* In lieu of individual bibliographical annotations, the authors of this manuscript have provided at the end of the bibliography a running commentary of notes which serve the additional purpose of comparing, grouping, and contrasting the various points of view of the authors included in this bibliography.

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NOTES ON THE BIBLIOGRAPHY

Bell of Columbia University, Muscatine of the University of California at Berkeley, and Daiches of Sussex, England, report extensively on both the content and context of general education in a university college.

Bell, who is primarily interested in the organization of knowledge, reviews the various educational formats that Harvard, Columbia, and the University of Chicago have taken since the challenge of German specialization was recognized. General education, he believes, has developed in response to the needs of the larger society. It has fostered self-awareness in time of war; it has absorbed new elements of the population into the intelligentsia; it has helped preserve a common philosophical heritage among the leaders of the next generation; and today, it is anchoring those who are unsettled by the explosion of knowledge and who are demoralized at the challenge of America's world leadership. Muscatine, who headed the Select Committee on Education of the University of California Senate, reviews the facts and figures of undergraduate life at Berkeley before engaging in broad suggestions for reform in student advising and in

the teaching of undergraduates. Daiches, who is one of the founders of Sussex, brings together a series of articles on pedagogy and on the organization of the various colleges which compose that university. Drawing on his own university experience at Edinburgh, Cambridge, and Chicago, Daiches examines the program in the School of English and American Studies. A very full description of the curricula of the five schools at Sussex gives specific examples of work required of all undergraduates.

Each of these scholars reports on his respective student population. Hutt, another writer in this field who is also at Sussex, is less statistical but highly refreshing. He and Muscatine point to the difficulties that students face when living away from home. With suddenly slackened pressure for performance, they have to schedule their own time and budget their own money. Bell and Muscatine are concerned with the undergraduate's rootlessness, his vulnerability to nihilism, and his readiness to forsake the discipline of formal education to embrace the instant knowledge and the instant belonging of student activism. Hutt examines the guilt that freshmen feel when given their freedom from supervision, from the job, and from the demands of a working-class home. Bell reminds us that graduates of preparatory schools may be impatient with further courses whose purpose is to broaden and enrich their knowledge; they may long for a tough course in a specific discipline. Muscatine concretely describes the incompetence of undergraduate advising and the impersonality of mass

processing; he documents the rarity of any personal contact between a student and any instructor other than the teaching assistant.

All of these writers confront the institutional situation where undergraduate education must be reformulated, both in its intellectual mission and in its organizational structure. Their key to the problem is in devising means for bringing better-trained academics into closer contact with undergraduates, despite the existence of a seller's market. Supracollegiate guild loyalty and departmental aggrandizement are countered at Sussex by establishing colleges which disperse members of a common discipline and oblige them to interact in a larger context. At Berkeley Muscatine recommends establishing a powerful administrative structure which will champion the interests of undergraduates.

Wisby, O'Brien, and McGrath agree with Muscatine that departments will not protect those faculty members engaged in undergraduate innovation and reform, and that a supradepartmental committee or dean or vice-president should be charged with this role.

Briggs shows that the University of Sussex is so organized that interdisciplinary work is unavoidable, and Corbett expands on the appropriateness of the tutorial for students from modest backgrounds. Esther Raushenbush describes a freshman's propulsion into serious thinking under the impact of face-to-face demands for precision and clarity by

his professors in chemistry and in English.

Bell would place enticing courses at strategic points in the undergraduate curriculum and would hope that their relevance would attract an able staff. Johnson notes that the versatility of earlier professors is not attainable today; faculty members often belong to professional associations that did not exist forty years ago, they write for journals unintelligible to their colleagues in other departments, and they cannot be distracted from trying to read at least a portion of what is published in their own fields. He would not have colleges ask graduate schools for well-rounded men; instead he suggests that colleges themselves assume the task of integrating the efforts of men who are unashamedly specialized.

Muscatine, whose emphasis is on ways and means of education, would organize administrative power and funds to promote innovation in the undergraduate curriculum. He would multiply the opportunities for personal contact between teacher and undergraduate, free faculty initiative in courses and curriculum, and better the lot and training of teaching assistants.

Case studies of imaginative use of staff and varying class size to improve general education at Boston University (La Fauci and Richter), Pennsylvania State University (Forster), the University of Wisconsin

(Pooley), and Brown University (Morgan), can scarcely counter Dressel's scathing indictment of the widespread inattention to general education, and to the lack of a philosophical, psychological, pedagogical, or even a budgetary rationale for new curricula. Blackman, in his reflections on accreditation, also hints at this lack of a curricular rationale in many institutions.

Axelrod sees standardization in undergraduate education as being on the ebb. He points with favor at attempts to treat the student as an individual, to dequantify the curriculum, to increase the ratio of teacher-scholars to researcher-scholars, and to humanize faculty-administration relations. His optimism is balanced by the implications of Hayward's "recipe for revolution," which enumerates the strategems and good sense used to achieve broad consent for massive innovation at Beloit College. Hayward's article also offers an antidote to the situation revealed in Oliphant's and Sullivan's analyses of delaying tactics and oligarchic rule in the lumpenuniversitat.

In sharp contrast to Mayhew's dispassionate introductory review of general education in social science and Thomas' irenic view is that of Wishy, who acidly restates the criticism he finds justified in all but superbly taught general education courses: they represent the "triumph of mere well-rounded and self-satisfied intelligence over demanding and

disturbing intellect." Weisinger balks at the "General Education Movement's understandable yearning for ideological synthesis without a willingness to pay the intellectual price for it," and he sees the establishment of relationships among the disciplines as worthwhile only for those scholars who have arrived at their own partial syntheses. Cameron is wholly unsympathetic to even interdisciplinary programs. He argues for solid grounding in a basic subject, and he scorns satisfaction with superficial analogies and the too-easy assumption that there is a relationship between the number of disciplines brought to bear on a problem and the amount of knowledge obtained. He dismisses the claims of the interdisciplinarians, saying "there is little reason to assume that conglomerate mixtures of established areas should be presented at a very low level of intensity." Wishy identifies teachers of general education as "academic cast offs, specialists not yet placed and people who can't get full-time jobs in traditional departments," who far outnumber the "few brilliant academic sports." Yet he is kinder to them than Cameron, who sees the general education teacher as a "conference-participant, prolegomenon-publisher, missionary to the discipline heathen," as "those theoretical quick change artists and experts at semantic disguise."

Megaw's blueprint (curriculum, staffing, policy making, and collegiate atmosphere) for a new college of liberal arts is the most ambitious recommendation so far. For significant background reading on these

subjects, the reader is directed to McGrath, Harris, Berelson, and Wilson; to Keppel's broader studies of American higher education; to Kerr and Von Hoffman on the multiversity; and to Brunnert and Stroup.

Schwab's interest is epistemological. He points out that truth is complicated, that one dare not teach the conclusions of a discipline as if they were the whole subject matter and the whole truth. The conceptual structure of a discipline determines what knowledge students will seek and in what terms truth will be confirmed. Schwab suggests a minimum of a yearly liberal arts seminar to parallel a student's specialty. In addition, he recommends a senior lecture series and a reading list to fill gaps that may have existed in course work. Such supplemental lectures and reading might give the social science complement to a specialty in science, presenting the social, political, and economic organization of scientific inquiry.

Hamilton also takes a long view of general education. More modest are McCoy's suggestions, one of which is to counter philosophic bias by coupling Bonhoeffer with Kauffman, and Sartre with Kierkegaard. Mayurama would overcome the exclusive internalization of specific disciplines' favorite conceptualizations (such as stimulus-response for psychology) and favored methods (such as laboratory for experimental physicists). He would ensure that the undergraduate have personal

contact with empirical work but not at the cost of excluding nonquantitative experiences from reality. Smith and Morgan, both concerned with depersonalization, agree that scientific investigation should not become the exclusive model for all knowledge.

Some useful models for the study of teachers of non-major courses (both integrated and atomistic) are Raushenbush's case histories, Heath's typologies, and Brown's "fill-the-slot" or succession scheme. Dressel's content analysis of college catalogs shows how much is revealed by even routine material. Walker's work is an illustration of how difficult it is to take even a sensible census of general education. Astin's search for a small set of readily perceivable characteristics to help distinguish family resemblances in a very heterogeneous population might prove a helpful analogy for dealing with the variety of factors found in general education. Cartter's scheme of establishing consensus could be used (at least for colleges within a region or state system) for a "reputation" study of types of general education offerings. Stern's College Characteristic Index has considerable interest, partly because the intellectual climate has patent and overt relevance to education and partly because it permits comparisons among elite liberal arts colleges, denominational colleges, and university colleges. Fahey and Ball's article provides an illustration of a fairly complex, longitudinal study of general education at the University of Pittsburgh.

REACTIONS

In order for this second series of "New Dimensions in Higher Education" to better serve the needs of colleges and universities throughout the nation, reader reaction is herewith being sought. In this instance, with respect to General Education in the Complex University, the following questions are asked:

1. Can you suggest other completed research, the results of which would add significantly to this report?

2. What problems related to this subject should be given the highest priority, in terms of further research?

3. What helpful suggestions do you have for institutions or faculty members who are striving for a more useful deployment of teaching assistants, or a more effective general education course?

4. What has your institution done, or what does it propose to do about changing or improving its general education program?

Kindly address reactions to:

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